CSC-591 Network Science
Project Proposal

Project Title: Rumor Source Finder

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Project's aim is to locate the source of a rumor in a given infected network.

Implementation Idea

➢ Initially, a graph (say a graph from facebook) is taken as input.
➢ A rumor is spread in the graph using some model like si model.
➢ A snapshot of the rumor infected graph is taken from time t to t+k, where t and k are random.
➢ Then the source of rumor will be estimated in the affected graph by using rumor centrality.
➢ The estimated rumor source will be compared to the true rumor source to determine the correctness of the detection.

Project will be implemented in python.

References

- D. Shah and T. Zaman. Rumor centrality: A universal source detector. In Proceedings of the 12th ACM SIGMETRICS/PERFORMANCE Joint International Conference on Measurement and Modeling of Computer Systems, SIGMETRICS '12, pages 199–210, New York, NY, USA, 2012. ACM.
- Feng Ji , Wee Peng Tay, An Algorithmic Framework for Estimating Rumor Sources With Different Start Times, IEEE Transactions on Signal Processing, v.65 n.10, p.2517-2530, May 2017.